

A man in a rage is sweeter than pretty laughing girls.

W. B. Cameron, professor in the medical school of Harvard University, is sponsor for that statement. He has analyzed the blood and tissues of angry men and pleasant girls and has found man in the height of angre is much sweeter. height of anger is much sweeter than any girl. Professor Cameron's investiga-

tions are in accordance with inves-tigations of other scientists. Most of these tests have been made with the X-ray photographic instrument and have been made on dogs and cats chiefly. The tissues of animals respond to emotions the same as those in human beings.

Every emotion causes a chemical change are Professor Company

change, says Professor Cameron. The emotions having the greatest The emotions having the greatest effect are fear and anger. There are four noteworthy changes in the human body due to rage and fear. The first is a cessation of action in the stomach and intestines, and the flow of the gastric juices; the second is an increased discharge of adrenalin, the fluid product of the adrenal gland, the third is the dotting of the blood and the fourth is the marked increase of fourth is the marked increase of sugar in the blood.

These are immediate reactions to outer conditions and are reflex responses, not of those of the will. These involuntary changes, caused by emotional crizes, have all proved useful in different ways to the body. at least, it may be inferred that rage and fear are to some extent beneficial.

When digestion is stopped, for larger quantities in other organs. and thereby aids in preventing ganle diseases. Secondly, the crease of sugar is an immediate source of muscular energy. The common belief that chocolate and

other sweets have nutritious qual-lities is based on this fact.

"Moreover, the discharge of the adrenalin fluid quickly relieves muscular fatigue, and it has also been known in great emotional been known in great emotional crises to have been the source of the sudden cure of chronic diseases. "The clotting of blood is the

fourth advantage, a very evident one, though more accidentally ben-eficial than the others. It is while in the state of fear or anger that one is most likely to receive bodily wounds, and the quick clotting of the blood prevents loss of blood. Of these four principal results of the emotions of rage and fear on the bodily conditions the distance.

the emotions of rage and fear on the hodily condition the discharge of the adrenal seems to be the most beneficial. The same effect as that produced on the nervous system by these emotions may be obtained by an injection of the drug ad-renalin in the blood."

STRENGTH GIVEN TO ANGRY ROYS

Professor Cameron's discovery explains the strength of the fighting angry boy. Many times around the school yards one can hear the exclamation. "I can lick you if I get good and mad once." Anger befuddles the brain, but at the many time it gives a sudden burst of strength, which carries the fighter to victory. The chemical change The chemical change to victory.

makes the difference.

How these changes can take place in the body is readily understood by the chemist. According to the molecular theory by which chemical changes are explained, each molecule of matter is com-posed of atoms. Different arrange-ments of these atoms in the molecule causes different substances to be formed.
Sugar for instance, is composed

of carbon, hydrogen and ogygen grouped together in a certain matter within the molecule. The sugar can be broken up so that the same substance will form carbon dioxide and alcohol. Chemical changes are brought about through the broadering of heat little and the introduction of heat. light and other agencies

The emotion of anger or fear acems to be one of these other agencies Formerly chemists called everything sugar that had a sweet taste. That idea has long since been exploded. Names, however which were given to substances in which were given to substances in the Cays when sweetness and sugar were synonymous, still cling to them. For example, we use the name sugar of lead. That is a rank poison. Yet sugar of lead has a sweet taste and it was named in that period.

Early in chemical history it was discovered there were different kinds of sugars. Cane sugar was the first to be nut in a class by itself. In 1619 it was discovered that milk contained sugar Examinations proved that inations proved that sugar in honey is different from cane sugar and it too, was given a different class-

Long study has been given to the emotions for sees but it to only

recently that chemists have investigated them with an idea of discovering what molecular changes take place in the human body.

The study of the emotions began with the Egyptians and Greeks Their study was one of imitation more than real investigation. Actors of ancient days used to attempt to imitate others in anger. They used to try to get an appearance typifying anger, joy, hope and all the other phases of the human mind. The actress who best could depict emotion was hailed as the

Even today actors are judged chiefly by their ability to portray the emotions. The man with a passive countenance is not a good subject for the actor and the actor does not waste his time trying to imitate him. He wants to imitate real emotion. The character in the book who hides his emotions does not reach the stage. If he does the character is changed. He is forced into the open and made to exhibit his character. He must show what he thinks in his face.

Artists have followed the lead of actors and have labored to show character in the face. Unless they in do so their art does not sell. There are any number of artists paint good pictures. Everywhere photographers can take good pic-The artist who can get character in the picture is the one who brings the crowds to his door in the forest.

In photography the problem always is to get the subject to be photographed in some expressive position and with some expression n the face. The picture is dull and lifeless without the facial expression showing some emotion

ARTISTS MUST PORTRAY EMOTIONS.

The artist who works with a pen or brush must strive for the same ideal. He must study his subject and seek some characteristic expression. Men like to have themselves pictured as strong com-manding figures. The problem of the artist is then to draw out their emotions and study them so as to paint them in some commanding position.

Women like to appear young. A wrinkled woman down't like to have all her wrinkles showing She wants youthfulness and hope showing in her face. The artist has to bring that nature of the woman out. Of course he could go ahead and draw the woman with her wrinkles and then paint them out but she ouldn't look natural then. He has to get the kind of youthfulness that

will wear well on that particular

Woman. Were we alone in the world or were we without ability to see each other or get some kind of preception of each other our emotions would show more on the surface than they do

An untrained child shows its full, emotions. The baby howls with rage and laughs with joy. It screams with terror and its face gives an expression of terror. looks disgusted and pleased. It looks domineering if it feels that way. As the child grows older it is taught not to get angry. Once in awhile it gets spanked for showing

anger. It learns to be angry without showing it. It learns in time to curb its other emotions.

A gambler leavns to wear a mask over his face so his opponent cannot tell what kind of a hand he has drawn. If the child played at cards he would smile with delight and frown with disappointment according to the kind of hand he drew, The old gambier learns not to show his feeling because if he does it means he will give away the secrets of his hand. The chemist, however, does not need to analyze the emotions by sight. Were it possible for quick analysis he could take a little blood or tissue and examine it. He could then make his report without difficulty.

practicable. Experiments are being made with X-Ray telescopes so that they can be turned on an object for immediate impressions. There is no doubt that science can go even forther. It is not at all improbable that in the course of time we can turn a glass on one with whom we are dealing and see his innermost feelings. In that wonderful glass, should it ever be perfected, we could see hate, jealousy, anger, joy,

At the present time that is im-

now much joy, how much fear, how

much courage and so on The dictograph has aided us in unting down criminals by getting their conversation. This goes further. It gots men's thoughts and emotions. It goes deeper than conversation ever went. It would make

men stand solely on their merits. Today we call girls sweet according to their face. If science makes the advance it is now promising we will call them sweet only after reading their character.

Sweetness of disposition and sweetness of substance are found to be two entirely different things. We have learned that a sugar fed child may become ill tempered. We can readily understand why when we study chemistry only a little. Sugar is simply a substance formed by certain molecular changes.

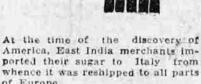
The greatest quantity of sugar used in America comes from cane. Cane sugar came to Europe from India and was transplanted in the West Indies. The Orientals knew all about the uses of sugar before the white race. In China they boiled sugar as early as the seventh century. When sugar first was introduced into Europe it was called cane honey. No one knows its exact origin except that it came from that mystic country called India.

and all the other emotions. Suppose a business man is trying to put a deal through with another man. Suppose both of these men are schooled well in the art of business and know well how to hide their emotions. The glass can be urned on them and each can see the kind of emotions the other is undergoing. There will be no more concealment then. Every-man will have to stand for what he is. The greedy public official will have to show his avarice to the world. The chemist can look at him with the X-Ray glass and every chemical combination will be shown. He will stand exposed as the sun now stands exposed before the spectro-Through the spectroscope we can

tell every element in the composition of the sun or any other luminous body. Through the X-Ray we can tell the elements in the human body and the proportion of those elements. We can stand behind a speaker in the assembly hall and calmly analyze him. We can tell if he believes what he says. We can tell if he has an ulterior motive. We can absolutely read every item in the man's makeup. NEW INSTRUMENT

BEATS DICTOGRAPH.

The process is not so difficult. The first thing needed is the chemical makeup of the man to be studied. It can then be anaylzed. We can find how much is anger,



In the age of discovery the Spanlards became great disseminators of sugar cultivation. Cane was planted in Maderia in 1420. It was carried to San Domingo in 1494 and from there spread all over West Indies.

By levying dues on the sugar imported to Spain from San Domingo in the early part of the sixteenth century, the King obtained money to build his palaces at Madrid and Toledo. Spain wrested the great sugar trade from Venice. In the Middle Ages Venice had been the great sugar market of the world. In Venice many of the great sugar inventions were made. Just before Spain wrested the trade Venice by raising sugar in the West Indies, a Venetian citizen was given royaltles of 100,000 crowns for inventing loaf sugar,

In 1747 German scientists discovered sugar in the beet root. The beet root growing industry has been important in Germany since that time. In America sugar beets are grown. The advantage of beet sugar is that it can be raised in temperate regions and cultivated by highly improved machinery, Cane sugar is raised under tropical or semi-tropical skies and all the labor is done by negroes. Formerly sugar was not refined on the plantations. The raw product was sent to Europe for refining.

Sugar cane is a species of grass. The stalks or canes resemble corn stalks of regions further north. Great quantities of cane are grown in Louisiana and other Southern States. As the canes approach maturity they throw out a long smooth hollow joint termed the arrow. As the joints ripen the leaves wither and fall away with the stem.

The juice is extracted by being pressed in a sugar mill between several heavy rollers. The juice is forced out by pressure. The juice is immediately boiled down to prevent fermentation.

Tobacco Fools Bears. As a safeguard against attacks

from angry bears, I. R. Chace, a veteran trapper, recommends tobacco in the pockets. His story has its comic as well

as its near tragic side Chace ran into a big cinnamon,

coming down the trail at full speed. The bear struck him in the pit of the stomach with his head, hurling him into the underbrush and sinking his teeth into his thigh. The bear's teeth were setting deeper. and Chace had about given up when the bear suddenly let go, sat up on his haunches and began to strangle, much like a dog with a hone in his throat. He continued the performance for a few seconds, then rose to his feet and started up the mountain as fast as he could

Chace discovered a plug of chewing tobacco in his pocket had been ground to a pulp and wet with the animal's saliva. The tobacco had evidently made him so sick that he was glad to let go.

Value of Co-Operation.

In the Northwest, at least, they are learning that the magic word in agriculture is co-operation. Sir Horace Plunkett's visit to St. Paul coincided with a report from a state board that Minnesota now has co-operative agencies enough; they need only to be strengthened. This the State University is undertaking, through courses on co-operation, with special training for managers. In the sale of wheat the extortion of elevator owners has led to the erection of more than 300 hundred farmers' elevators. The costly method of selling cattle through buyers and commission men has given way to the formation of 100 live stock shipping associations. Three-fourths of the 864 creameries are co-operative, and each ships its product direct to New York or Chicago. More in line with Sir Horace's work in Ireland are twelve cow testing associations. scores of co-operatice breeding associations and hundreds of co-operative buying agencies.

